Work Order ID 75056 \*75056\* Page 1 October-17-11 10:40:25 AM Accept Item ID: D3488-041 \*N900040100\* Setup Start **Revision ID:** Blade Fitting Assembly, LH Item Name: 17/10/2011 **Start Oty: 12.00 Start Date: Cust Item ID: Required Date: 28/10/2011** Req'd Qty: 12.00 **Customer:** Reference: Run Start Process Plan: ML 5 Date: 1110 17 Tooling: Approvals: Date: SPC (Y/N): Date: Date: Sequence ID/ **Operation** Tool ID Tool # Plan Accept Reject Set Up/ Reject Insp. **Work Center ID Description Run Hours** Code Oty Qty Number Stamp Draw Nbr. Revision Nbr D3488 ...... Rev B 0.00 DOOSAN LATHE Doosan 0.00 Memo Doosan Lathe 1-Turn as per Dwg DSK 101 & Folio FA6252-Deburr 1010/26 110 QC2- Inspect parts off machine FAI/FAIB 0.00 12 6 \*110\* OC Memo Quality Control **120** HAAS CNC VERTICAL MACHINING #1 \*120\* HAAS 1 Memo HAAS CNC vertical machine #1 1-Machine as per Folio FA625 & Dwg D34882-Deburr

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W/O:			W	ORK ORDER CHANG	SES				,	
DATE	STEP	PR	OCEDURE CHA	NGE	Ву	,	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector
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Part No	•	PAR #:	Fault Cate	gory:	_ NCR: Y	es N	o <b>DQA</b>	:	_ Date: _	
	Re	esolution:	Dispositio	n:	QA: N/C	Clos	ed:		Date:	······
NCR:			WORK ORD	ER NON-CONFORM	ANCE (N	CR)				
DATE	STEP	Description of NC	Initial		tion B	ın &	Verifica		Approval	Approval
	0.2.	Section A	Chief Eng	Action Description Chief Eng		ate	Sectio	n C	Chief Eng	QC Inspector
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Work Orde		056	· .	*750	156*	·			Page 2
Revision ID: Item Name:	D3488-041  Blade Fitting #  17/10/2011	Assembly, LH  Start Qty: 12.00  Req'd Qty: 12.00	*12*	Accept	Cust Item I	040100 D:	<b>)*</b> s	etup Start	1/1/2
Reference:			*12*		Customer:		R	tun Start	* *NID1*
Approvals:			Oate: Oate:	Tooling: SPC (Y/N):	···	ate:		Stop	*NR2*
Sequence ID/ Work Center ID 130 *130* QC Quality Control	•	Operation Description QC2- Inspect parts off machi Memo	ne FAI/FAIB	Set Up/ Run Hours 0.00 F.K- 0.00	Tool ID	Tool # Plan Code	Accept Qty	Reject Qty	Reject Insp. Number Stamp
*140 *140* QC Quality Control		QC8- Inspect parts - second c	heck	0.00 0.00	- u/u/o 8			<b>/</b>	<del>-</del>
150 *150* HandFinish Hand Finishing		Chemical Conversion Coat po	er QSI005 4.1	0.00			129	6 M	J11/4/10

Dart	Aerospace Ltd	
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W/O:			\A/4	ORK ORDER CHANGE	<u>c</u>			· · · · · · · · · · · · · · · · · · ·	·
DATE	STEP	PRO	CEDURE CHA		Ву	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector
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Part No	•	PAR #:	Fault Cate	gory:	NCR: Yes	No DQ	A:	Date:	
	Re	esolution:	Dispositio	n:	QA: N/C C	losed:		Date: _	
NCR:				ER NON-CONFORMAN					
·		Description of NC		Corrective Action Section	B	Verifi	cation	Approval	Approval
DATE	STEP	Section A	Initial Chief Eng	Action Description Chief Eng	Sign o	& Sect	ion C	Chief Eng	QC Inspector
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		<u>,</u>							
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Work Orde				*750	56*							Page 3
Item ID: Revision ID:	D3488-041			Accept	*N900	<b>040</b>	100	*	Setup	Start	*NS	31*
Item Name: Start Date: Required Date: Reference:	17/10/2011	Assembly, LH  Start Qty: 12.00  Req'd Qty: 12.00	*12* *12*		Cust Item II Customer:	D:				Stop	*N.	<b>3</b> 2*
Approvals:	Process Pla	nn:	Date:	Tooling: SPC (Y/N):	Da				Run	Start Stop	*NF	
Sequence ID/ Work Center II 160 *160* Powdercoat Powder Coating	8430	, ,	0~10	Set Up/ Run Hours 0.00  0.00  OVEN TEMPERATURE:	Tool ID		Plan Code	Accept Qty	Rej Qty			Insp. Stamp
*170* QC Quality Control		QC3- Inspect Part Finish  Memo		0.00				B	K	L,	<u>  -  -  </u>	l <u>.                                    </u>
180		HandEinishina	·	0.00						ľ,		

\*180\*
HandFinish

Memo

Hand Finishing

Install Inserts as per Dwg D3488

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#### **Dart Aerospace Ltd** W/O: **WORK ORDER CHANGES** Approval **Approval** DATE **STEP** PROCEDURE CHANGE By Date Qtv Chief Eng / QC Inspector Prod Mgr Part No: \_\_\_\_\_\_ PAR #: \_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_ Date: \_\_\_ Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_ **WORK ORDER NON-CONFORMANCE (NCR)** NCR: **Corrective Action** Section B Verification **Description of NC Approval Approval** DATE **STEP** Sign & Initial **Action Description** QC Inspector Section A Section C Chief Eng Chief Eng **Date** Chief Eng

Work Ordo				*750	756*							Page 4
Item ID: Revision ID: Item Name:	D3488-041 Blade Fitting	Assembly, LH		Accept	*N900	<b>040</b>	100	)*	Setup	Start Stop	1.71	S1* S2*
Start Date: Required Date: Reference:	17/10/2011	<b>Start Qty:</b> 12.00 <b>Req'd Qty:</b> 12.00	*12* *12*		Cust Item II Customer:	D:					IVI	<b>3</b> /
Approvals:		n:	Date:	Tooling: SPC (Y/N):	Da	te:			Run	Start Stop	*N *N	R1* R2*
Sequence ID/ Work Center II  190  *100*  QC  Quality Control	)	Operation Description QC5- Inspect part comple	teness to step on W/O	Set Up/ Run Hours 0.00	Tool ID	Tool#	Plan Code	Accept Qty	Rej Qty		Reject Number	Insp. Stamp
200 *200* Packaging Packaging		Identify as per dwg & Sto  Memo	ck Location: FPZ	0.00			C	12x	- <del>-</del> -9	<u> </u>	Y.u.	4/15
210		QC21- Final Inspection -	Work Order Release	0.00							1	1 -10-

Memo

Quality Control

MF 11-13

## **Dart Aerospace Ltd**

W/O:			WC	ORK ORDER CHANG	ES				
DATE	STEP	PRO	CEDURE CHA	NGE	Ву	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector
						••			
		· 							
Part No	•	PAR #:	Fault Cate	gory:	NCR: Yes	No DQA	<b>\</b> :	Date:	
	R	esolution:	Dispositio	n:	QA: N/C Clo	sed:		Date:	
NCR:	***************************************	V	WORK ORDI	ER NON-CONFORMA	NCE (NCR)	)		and the second s	
DATE	STEP	Description of NC		Corrective Action Section		Verific		Approval	Approval
DAIL	SILF	Section A	Initial Chief Eng	Action Description Chief Eng	Sign & Date	Section	on C	Chief Eng	QC Inspector
								·	
							•		

# **Picklist Print** Work Order ID: 75056

October-17-11 10:40:30 AM

\*75056\*

D3488-041

\*D3488-041\*

Parent Item Name: Blade Fitting Assembly, LH

Start Date: 17/10/2011

**Required Date: 28/10/2011** 

Page 1

**Start Qty: 12.00** 

Required Qty: 12.00

**Comments:** 

Parent Item:

IPP Rev:A New Issue 06-02-28 JLM

IPP Rev:B As per Rev B 06-03-30 JLM

	IPP Rev:C Now O	n Doosan Lathe	JLM	Verified BY:	DD								
Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
ALS7-1032-225		Purchased	No				Each	1,173.000		48			
*AI S7-10	32-225*								**	11189	66(x	42)	Hulule
ALS4-10	032-225			Location		Loc (	<u>Oty</u>	Loc Code					
				ST282		]	173		_				
					100896		146		_		_		
					111529		27		_		-		
					118520	1	000		_		_		
D6103-003		Manufactured	No				Each	19.0000		12			
*D6103-0	ივ*								**	Le		101	26
				Location		Loc C	<u>Oty</u>	Loc Code					
				MAT			7						
					71884		7			ڏ	_		
				MAT043			12				_		
					69901		3				_		
					71178		9				_		

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### **Dart Aerospace Ltd**

		W	ORK ORDER CHANG	ES			· · · · · · · · · · · · · · · · · · ·	4
STEP	PRO	OCEDURE CHA	NGE	Ву	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector
•	PAR #:	Fault Cate	gory:	NCR: Yes	No <b>DQ</b>	<b>A</b> :	Date:	
	,	WORK ORD	ER NON-CONFORMA	NCE (NCR	) . *		,	
OTED	Description of NC				Verific	ation	Approval	Approval
SIEP	Section A	Initial Chief Eng	Action Description Chief Eng	Sign & Date			Chief Eng	QC Inspector
		:PAR #: Resolution:  Description of NC	STEP PROCEDURE CHA  PAR #: Fault Cate  Resolution: Disposition  WORK ORD  STEP Description of NC Section A Initial	STEP PROCEDURE CHANGE  PAR #: Fault Category:  Resolution: Disposition:  WORK ORDER NON-CONFORMA  STEP Description of NC Section A Corrective Action Section Initial Action Description	PAR #: Fault Category: NCR: Yes	STEP PROCEDURE CHANGE By Date  :PAR #:Fault Category:NCR: Yes No DQ/ Resolution:Disposition:QA: N/C Closed:  WORK ORDER NON-CONFORMANCE (NCR)  STEP Description of NC	STEP PROCEDURE CHANGE By Date Qty	STEP PROCEDURE CHANGE By Date Qty Chief Eng / Prod Mgr  : PAR #: Fault Category: NCR: Yes No DQA: Date: Resolution: Disposition: QA: N/C Closed: Date: WORK ORDER NON-CONFORMANCE (NCR)  STEP Description of NC Section A Corrective Action Section B Section C Section C Chief Eng Chi

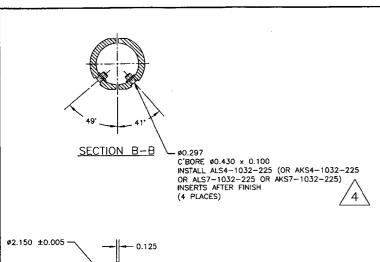
DART AEROSPACE LTD	Work Order:	75054
Description: Blade Fitting, LH / Turning Detail for D3488-1/-2	Part Number:	D3488-1
Inspection Dwg: D3488 / DSK101 Rev: B / D		Page 1 of 2

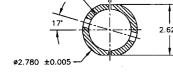
### FIRST ARTICLE INSPECTION CHECKLIST

X	First Article	Prototype
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Drawing Dimension	Tolerance	Actual Dimension	Accept	Reject	Method of Inspection	Comments
		<u> </u>	l ne Section		•	
Ø2.150	+/-0.005	2.150		<u> </u>		
Ø2.780	+/-0.005	2100				
Ø3.125	+/-0.010	3.125				
Ø3.346	+/-0.010	0.3.346				
0.125 x 45°	+/-0.010 x +/-0.1°	./25x 45				
8.000	+0.030/-0.000	8,076	//			
9.250	+/-0.010	7,251				
0.188	+/-0.010	.188				- W
R0.032	+/-0.010	2032				, 14 <u>1</u> 1 .
R0.062	+/-0.010	12.062	/ ,			
Ø0.297	+0.005/-0.001	301				
Ø0.430	+/-0.010	0,434				
0.100	+/-0.010	102				
0.125	+/-0.010	(32				
2.620	+/-0.010	2,621				
3.500	+/-0.010	3.600				
1.005	+/-0.010	1.001	7			
Ø0.484	+0.005/-0.001	.488				
1.180	+/-0.010	11180				
3.150	+/-0.010	3,150				
3.070	+/-0.010	3,069				
R0.063	+/-0.010	R.033				
			-			. 10

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SECTION A-A

#### D3488-041/-042 BLADE FITTING ASSEMBLY PARTS LIST

QTY -041	QTY -042	PART NUMBER	DESCRIPTION
X		D3488-041	BLADE FITTING ASSEMBLY (LH)
	X	D3488-042	BLADE FITTING ASSEMBLY (RH)
1		D3488-1	BLADE FITTING (LH)
	1	D3488-2	BLADE FITTING (RH)
4	4	ALS4-1032-225 or AKS4-1032-225 or ALS7-1032-225 or AKS7-1032-225	INSERT

#### D3488-041/-042 BLADE FITTING

MAKE D3488-1/-2 FROM ALUMINUM 7075-T7351 ROUND BAR MATERIAL:

PER QQ-A-225/9

(REF. DART MATERIAL SPEC M7075T73R)

2) FINISH: ACID ETCH, ALODINE PER DART QSI 005 4.1

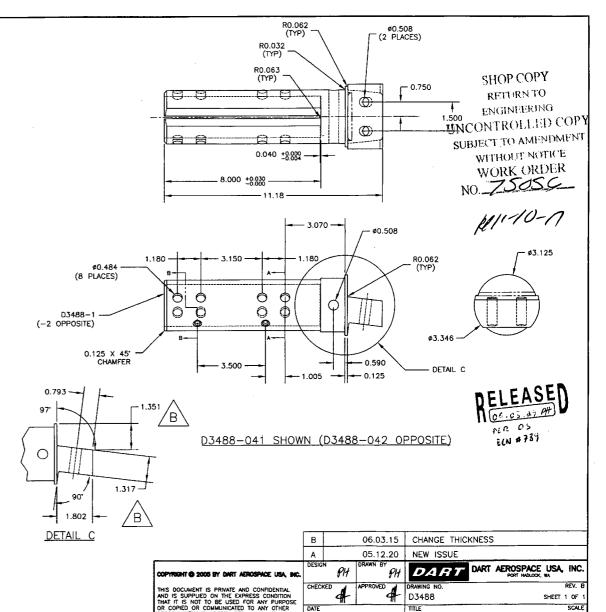
POWDER COAT WHITE (REF 4.3.5.1) PER DART QSI 005 4.3

BREAK UNMARKED SHARP EDGES 0.010 TO 0.020

INSTALL INSERTS AFTER POWDER COAT

ALL DIMENSIONS ARE IN INCHES

TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED



DATE

06.03.15

PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE USA, INC.

TITLE

BLADE FITTING

SCALE

1:3

DART AEROSPACE LTD	Work Order:	75056
Description: Blade Fitting, LH	Part Number:	D3488-1
Inspection Dwg: D3478-1 Rev: B		Page 2 of 2

## FIRST ARTICLE INSPECTION CHECKLIST

Drawing Dimension	Tolerance	Actual Dimension	Accept	Reject	Method of Inspection	Comments	
Ø,508	1006/-:001	,5085	7		FK-04	Vern	
0.750	+/010	744	7		31006		
1.500	+/010	1.500	7		FKOY	Height gauge Vern	
11.18	1/030	11.177	V		31006	Height gango	
R -062	4-0010	.062	7		rad gong		
.125	1/- 0125	0174	7		FKOY	Vern :	
.590	+/0/00	590	V		31006	Height gauge	
.743	t010	.792	7		1 koy	Vecn	
1.351	+/010	1.351	7		31006	Height gauge	
1.317	+/- 0010	1.317	1		FK-04	Vern	
1.802	4- 010	(, 803	>	~	- <del>510-16</del>	Dileight googs.	
					FK-OG	Depth gauge	
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		·					
						,	

Measured by:	Audited by:	ml	Preliminary Approval:	
Date: /////04	Date:	11/1/08	Date:	

Rev	Date	Change	Revised by	Approved
E	10.04.14	Added preliminary approval	KJ	